Amendments to the Claims:

1. (Previously presented) A computer implemented method for designing or deploying a communications network, comprising the steps of:

provided, using a computer program, a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment;

providing, with said computer program, attributes for a plurality of system components which may be used in said physical environment;

selecting, using said computer program, specific components from said plurality of system components for use in said computerized model;

representing, using said computer program, said selected specific components in said display; and

determining, using said computer program, if said attributes of said system components will prevent the proper installation or operation of a communications network formed from said selected specific components for a specific design for said physical environment, and, if said attributes will prevent the proper installation or operation of said communications network providing an indication of a fault in one or more design parameters of said communications network.

2. (Original) The method of claim 1 wherein said attributes include performance attributes and further comprising the step of running prediction models using the computerized model and said performance attributes to predict performance characteristics of a communications network composed of said selected specific components if said attributes of said system components do not prevent the proper installation or operation of said communications network.

3. (Original) The method of claim 2 wherein said attributes include frequency dependent characteristics of said selected components and said prediction models utilize said frequency dependent characteristics in calculations which predict said performance characteristics of said communications network.

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4. (Original) The method of claim 1 further comprising the step of generating a bill of materials containing cost information for said selected specific components utilized in said communications network.

5. (Previously presented) A computer implemented method for designing or deploying a communications network, comprising the steps of:

provising a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment;

providing attributes for a plurality of system components which may be used in said physical environment;

selecting specific components from said plurality of system components for use in said computerized model;

representing said selected specific components in said display;

generating a bill of materials containing cost information for said selected specific components utilized in said communications network; and

determining, using said computer program, if said attributes of said system components will prevent the proper installation or operation of a communications network formed from said selected specific components, and, if said attributes will prevent the proper installation or operation of said communications network, providing an indication of a fault in one or more design parameters of said communications network, and

wherein said cost information comprises a maintenance schedule for selected specific components.

6. (Original) The method of claim 1 wherein said display is three dimensional.

7. (Previously presented). A computer implemented method for designing or deploying a communications network, comprising the steps of:

providing a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment;

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providing attributes for a plurality of system components which may be used in said physical environment;

selecting specific components from said plurality of system components for use in said computerized model;

representing said selected specific components in said display;

determining, using said computerized model, if said attributes of said system components will prevent the proper installation or operation of a communications network formed from said selected specific components, and, if said attributes will prevent the proper installation or operation of said communications network, providing an indication of a fault in one or more design parameters of said communications network; and

providing cost limits for said communications network, and wherein said fault occurs when said cost limits are exceeded.

8. (Previously presented) A computer implemented method for designing or deploying a communications network, comprising the steps of:

providing a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment;

providing attributes for a plurality of system components which may be used in said physical environment;

selecting specific components from said plurality of system components for use in said computerized model;

representing said selected specific components in said display;

determining, using said computerized model, if said attributes of said system components will prevent the proper installation or operation of a communications network formed from said selected specific components, and, if said attributes will prevent the proper installation or operation of said communications network, providing an indication of a fault in one or more design parameters of said communications network; and

specifying a brand choice for use in said communications network, and wherein said fault occurs when said brand choice is not selected in said selecting step.

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9. (Original) The method of claim 1 wherein said fault results from improper connections between two or more of said selected specific components.

10. (Original) The method of claim 1 wherein said fault results from mismatches of physical attributes of said selected specific components.

11. (Previously presented) A computer implemented method for designing or deploying a communications network, comprising the steps of:

providing a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment;

providing attributes for a plurality of system components which may be used in said physical environment;

selecting specific components from said plurality of system components for use in said computerized model;

representing said selected specific components in said display;

determining, using said computerized model, if said attributes of said system components will prevent the proper installation or operation of a communications network formed from said selected specific components, and, if said attributes will prevent the proper installation or operation of said communications network, providing an indication of a fault in one or more design parameters of said communications network; and

wherein said fault results from mismatches in maintenance schedules of said selected specific components.

12. (Previously presented) An apparatus for designing or deploying a communications network, comprising:

a program stored in a computer readable medium comprising means for providing

(I) a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment, and

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(II) performance attributes for a plurality of system components which may be used in said physical environment, a number of said system components having associated with them specific attributes;

a means for selecting, using said program, specific components from said plurality of system components for use in said computerized model;

a means for representing, using said program, said selected specific components in said display; and

a means for determining, using said program, if a fault in one or more design parameters of a communications network composed of selected specific components based on said specific attributes of said system components for a specific design in said physical environment will occur, and if so providing an indication of a fault.

13. (Previously presented) An apparatus as recited in claim 12 further comprising a means for running prediction models using said computerized model and said performance attributes to predict performance characteristics of said communications network.

14. (Previously presented) The apparatus as recited in claim 13 wherein said specific components have frequency dependent characteristics associated with them, and wherein said prediction models utilize said frequency dependent characteristics in calculations which predict said performance characteristics of said communications network.

15. (Original) The apparatus of claim 12 further comprising a means for generating a bill of materials containing cost information for said selected specific components utilized in said communications network.

16. (Previously presented) An apparatus for designing or deploying a communications network, comprising:

a program stored in a computer readable medium comprising means for providing

(I) a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment, and

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(II) performance attributes for a plurality of system components which may be used in said physical environment, a number of said system components having associated with them specific attributes;

a means for selecting specific components from said plurality of system components for use in said computerized model;

a means for representing said selected specific components in said display;

a means for providing an indication of a fault in one or more design parameters of a communications network composed of selected specific components based on said specific attributes of said system components; and

a means for generating a bill of materials containing cost information for said selected specific components utilized in said communications network,

wherein said cost information comprises a maintenance schedule for selected specific components.

17. (Original) The apparatus of claim 12 wherein said display is three dimensional.

18. (Previously presented) An apparatus for designing or deploying a communications network, comprising:

a program stored in a computer readable medium comprising means for providing

(I) a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment, and

(II) performance attributes for a plurality of system components which may be used in said physical environment, a number of said system components having associated with them specific attributes;

a means for selecting specific components from said plurality of system components for use in said computerized model;

a means for representing said selected specific components in said display; and

a means for determining if a fault in one or more design parameters of a communications network composed of selected specific components based on said specific attributes of said system components will occur, and if so providing and indication of a fault,

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wherein said fault results from exceeding cost limits for said communications network.

19. (Previously presented) An apparatus for designing or deploying a communications network, comprising:

a program stored in a computer readable medium comprising means for providing

(I) a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment, and

(II) performance attributes for a plurality of system components which may be used in said physical environment, a number of said system components having associated with them specific attributes;

a means for selecting specific components from said plurality of system components for use in said computerized model;

a means for representing said selected specific components in said display; and

a means for determining if a fault in one or more design parameters of a communications network composed of selected specific components based on said specific attributes of said system components will occur, and if so providing an indication of a fault,

wherein said fault results from failing to comply with specified brand choice preferences.

20. (Original) The apparatus of claim 12 wherein said fault results from improper connections between two or more of said selected specific components.

21. (Original) The apparatus of claim 12 wherein said fault results from mismatches of physical attributes of said selected specific components.

22. (Previously presented) An apparatus for designing or deploying a communications network, comprising:

a program stored in a computer readable medium comprising means for providing

(I) a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment, and

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(II) performance attributes for a plurality of system components which may be used in said physical environment, a number of said system components having associated with them specific attributes;

a means for selecting specific components from said plurality of system components for use in said computerized model;

a means for representing said selected specific components in said display; and

a means for determining if a fault in one or more design parameters of a communications network composed of selected specific components based on said specific attributes of said system components will occur, and if so providing an indication of a fault,

wherein said fault results from mismatches in maintenance schedules of said selected specific components.

23. (Previously presented) A computer implemented method for designing or deploying a wireless communications system, comprising the steps of:

providing, using a computer program, a computerized model which represents a physical environment in which said wireless communications system is or will be installed, said computer program providing a display representing at least a portion of said physical environment;

providing, using said computer program, attributes for a plurality of system components which may be used in said physical environment;

selecting, using said computer program, specific components from said plurality of system components for use in said computerized model;

generating a bill of materials containing cost information for said selected specific components utilized in said wireless communications system;

representing, using said computer program, said selected specific components in said display; and

determining, using said computer program, if said attributes of said system components will prevent the proper or desired installation or operation of said wireless communications system formed from said selected specific components for a specific design or deployment for said physical environment, and if said attributes of said system components will prevent the proper or desired installation or operation, said computer program provides an indication of a fault for said specific design or deployment of said wireless communications system.

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24. (Previously presented). The computer implemented method of claim 23 wherein said bill of materials comprises maintenance schedule information.

25. (Previously presented) The method of claim 23 wherein said attributes include technical or electrical attributes and further comprising the step of running prediction models using said computerized model and said technical or electrical attributes to predict performance characteristics of a wireless communications system composed of said selected specific components if said attributes of said selected specific system components do not prevent the proper or desired installation or operation of said wireless communications system.

26. (Previously presented) The method of claim 25 wherein said attributes include frequency dependent characteristics of said selected components and said prediction models utilize said frequency dependent characteristics in calculations which predict said performance characteristics of said wireless communications system.

27. (Previously presented) The method of claim 23 further comprising the step of providing one or more cost limits for at least a portion of said wireless communication system, and when said one or more cost limits are exceeded by the selection of one or more of said selected specific components, a fault is indicated.

28. (Previously presented) The method of claim 23 wherein said display provided by said computer program is three dimensional.

29. (Previously presented) A computer implemented method for designing or deploying a wireless communications system, comprising the steps of:

    providing, using a computer program, a computerized model which represents a physical environment in which said wireless communications system is or will be installed;

    providing, using said computer program, attributes for a plurality of system components which may be used in said wireless communications system;

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selecting, using said computer program, specific components from said plurality of system components for use in said wireless communications system;

representing, using said computer program, said specific components in a display, said display also represents at least a portion of said physical environment,

determining, using said computer program, if said attributes of said specific components will prevent the proper or desired installation or operation of said wireless communications system for a specific design or deployment for said physical environment, and if said attributes of said specific components will prevent the proper or desired installation or operation of said computer program provides an indication of a fault; and

providing one or more cost limits for at least a portion of said wireless communications system, and wherein said fault occurs when said one or more cost limits are exceeded.

30. (Previously presented) A computer implemented method for designing or deploying a wireless communications system, comprising the steps of:

providing, using a computer program, a computerized model which represents a physical environment in which said wireless communications system is or will be installed;

providing, using said computer program, attributes for a plurality of system components which may be used in said wireless communications system;

selecting, using said computer program, specific components from said plurality of system components for use in said wireless communications system;

representing, using said computer program, said specific components in a display, said display also represents at least a portion of said physical environment,

determining, using said computer program, if said attributes of said specific components will prevent the proper or desired installation or operation of said wireless communications system for a specific design or deployment for said physical environment, and if said attributes of said specific components will prevent the proper or desired installation or operation of said wireless communications system, said computer program provides an indication of a fault; and

specifying a brand choice or one or more component models or part numbers for use in said wireless communications system, and wherein said fault occurs when said brand choice or one or more component models or part numbers are not selected in said selecting step.

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31. (Previously presented) A computer implemented method for designing or deploying a wireless communications system, comprising the steps of:

provideing, using a computer program, a computerized model which represents a physical environment in which said wireless communications system is or will be installed, said computer program providing a display representative of at least a portion of said physical environment;

provideing, with said computer program, attributes for a plurality of system components which may be used in said wireless communications system;

selecting, using said computer program, specific components from said plurality of system components for use in said wireless communications system;

representing, using said computer program, said specific components in said display,

determining, using said computer program, if said attributes of said specific components will prevent the proper or desired installation or operation of said wireless communications system for a specific design or deployment for said physical environment, and, if said attributes of said specific components will prevent the proper or desired installation or operation, said computer program provides an indication of a fault, and wherein said fault results from mismatches in maintenance or replacement schedules of said specific components.

32. (Previously presented) A computer implemented method for designing or deploying a wireless communications system, comprising the steps of:

provideing, using a computer program, a computerized model which represents a physical environment in which said wireless communications system is or will be installed, said computer program providing a display representative of at least a portion of said physical environment;

provideing, with said computer program, attributes for a plurality of system components which may be used in said wireless communications system;

selecting, using said computer program, specific components from said plurality of system components for use in said wireless communications system;

using said computer program to make performance predictions for said wireless communications system based on said specific components and said computerized model;

representing, using said computer program, said specific components and at least a portion of said physical environment in said display; and

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determining, using said computer program, if said attributes of said specific components will prevent the proper or desired installation or operation of said wireless communications system formed from said specific components for a specific design for said physical environment, and, if said attributes will prevent the proper or desired installation or operation, said computer program provides an indication of a fault.

33. (Previously presented) The method of claim 32 further comprising the step of providing one or more cost limits for at least a portion of said wireless communication system, and when said one or more cost limits are exceeded by the selection of one or more of said specific components, a fault is indicated.

34. (Previously presented) The method of claim 32 wherein said attributes of said specific components include frequency dependent characteristics and said performance predictions utilize said frequency dependent characteristics in calculations to predict one or more performance characteristics of said wireless communications system.

35. (Previously presented) The method of claim 32 further comprising the step of generating a bill of materials containing cost information for said selected specific components utilized in said wireless communications system.

36. (Previously presented) The method of claim 32 wherein said display represents the physical environment as three dimensional.

37. (Previously presented) An apparatus for designing or deploying a communications system, comprising:

a program stored in a computer readable medium comprising

(1) a computerized model which represents a physical environment in which a communications system is or will be installed, said program providing a display representative of at least a portion of said physical environment, and

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(II) performance attributes for a plurality of system components which may be used in said communications system, a number of said system components having associated with them specific attributes;

a selector for selecting specific components from said plurality of system components represented in said program;

a display for representing specific components selected with said selector and their locations within at least a portion of said physical environment; and

an indicator for indicating a fault for a communications system composed of said specific components based on said specific attributes, said indicator being activated when said program determines said communications system composed of said specific components based on said specific attributes will prevent the proper or desired installation or operation of said communications system.

38. (Previously presented) An apparatus as recited in claim 37 further comprising prediction models in said program, said prediction models use said computerized model and said performance attributes to provide performance predictions of said communications system.

39. (Previously presented) The apparatus as recited in claim 38 wherein said specific components have frequency dependent characteristics associated with them, and wherein said prediction models utilize said frequency dependent characteristics in calculations which provide said performance predictions of said communications system.

40. (Previously presented) The apparatus as recited in claim 37 further comprising a bill of materials generator for generating a bill of materials containing cost information for at least some of said specific components in said communications system.

41. (Previously presented) The apparatus as recited in claim 40 wherein said bill of materials comprises a maintenance or replacement schedule for at least some of said specific components.

42. (Previously presented) The apparatus as recited in claim 37 wherein said display represents the physical environment as three dimensional.

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43. (Previously presented) The apparatus as recited in claim 37 wherein said fault results from exceeding one or more cost limits for at least a portion of said communications network.

44. (Previously presented) The apparatus as recited in claim 37 wherein said fault results from failing to comply with brand choice or component model or part number preferences.

45. (Previously presented) The apparatus as recited in claim 37 wherein said fault results from mismatches of physical attributes of said selected specific components.

46. (Previously presented) The apparatus as recited in claim 37 wherein said fault results from mismatches in maintenance or replacement schedules of at least some of said specific components.

47. (Previously presented) An apparatus for designing or deploying an in-building wireless communications network, comprising:

a program stored in a computer readable medium comprising

(I) a computerized model which represents a physical environment in which said in-building wireless communications network is or will be installed, said program providing a display representative of at least a portion of said physical environment,

(II) attributes for a plurality of system components which may be used in said in-building wireless communications network, a number of said system components having associated with them specific attributes, and

(III) prediction models which use said computerized model and said attributes to predict performance characteristics of said in-building wireless communications network;

a selector for selecting specific components represented within said program from said plurality of system components for use in said in-building wireless communications network;

a display for representing said specific components selected with said selector and their locations within at least a portion of said physical environment; and

an indicator for indicating a fault due to the failure of meeting a proper or desired operation or performance characteristic with said in-building wireless communications network

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composed of said specific components based on said specific attributes of said specific components for a specific design or deployment for said physical environment.

48. (Previously presented) The apparatus as recited in claim 47 wherein said specific components have frequency dependent characteristics associated with them, and wherein said prediction models utilize said frequency dependent characteristics in calculations which predict said performance characteristics of said in-building wireless communications network.

49. (Previously presented) The apparatus as recited in claim 47 further comprising a bill of materials generator for generating a bill of materials containing cost information for at least some of said specific components in said in-building wireless communications network.

50. (Previously presented) The apparatus as recited in claim 49 wherein said bill of materials comprises a maintenance or replacement schedule for at least some of said specific components.

51. (Previously presented) The apparatus as recited in claim 47 wherein said display represents the physical environment as three dimensional.

52. (Previously presented) The apparatus as recited in claim 47 wherein said fault results from exceeding one or more cost limits for at least a portion of said in-building wireless communications network.

53. (Previously presented) The apparatus as recited in claim 47 wherein said fault results from failing to comply with brand choice or component model or part number preferences.

54. (Previously presented) The apparatus as recited in claim 47 wherein said fault results from mismatches of physical attributes of said specific components.

55. (Previously presented) The apparatus as recited in claim 47 wherein said fault results from mismatches in maintenance or replacement schedules of at least some of said specific components.

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